

Effect of the Inclination Angle on the Defining Parameters of Chip Removal in Rotational Turning

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The efficiency of the machining processes, the accuracy of the manufactured parts, and the quality of the machined surface are determined by several factors: the tool geometry, the parameters that affect the kinematic relations, and the cutting parameters. Therefore it is necessary to investigate the effect of each characteristic parameter on the technological parameters in the research of rotational turning. In this paper first we sum up the geometric and kinematic relations that affect the defining parameters of chip removal. We give an overview of the parameters which must be given in rotational turning. We briefly show the method used for the mathematic-analytic definition of these parameters. After that we determinate and analyse the alteration effect of the inclination angle on the resultant axial feed, on the theoretical arithmetic mean deviation and on the characteristic parameters of the chip cross-section.

Keywords: rotational turning, chip removal characteristics, inclination angle

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